Claims:

1. A delay composition comprising mixed particles of silicon, barium sulfate and red lead, the red lead being present in an amount of about 3 to 15 % by weight of the composition.

2. The composition of claim 1 wherein the red lead is present in an amount of about 6 to 12 % by weight of the composition.

3. The composition of claim 1 wherein the red lead is present in an amount of about 9 to 12 % by weight of the composition.

4. The composition of claim 1 wherein the composition contains about 40 to 60 % by weight of said barium sulfate and about 25 to 50% by weight of said silicon.

5. The composition of claim 1 further containing a binder causing collections of said particles to bind together in the form of free-flowing granules.

6. The composition of claim 5 wherein said binder is selected from the group consisting of solvent-soluble polymers, silica and swelling clays.

7. The composition of claim 5 wherein said binder is a water-soluble derivative of cellulose.

8. The composition of claim 5 wherein the binder is carboxymethyl cellulose.

9. The composition of claim 8 wherein said binder is present in an amount of 0.2 to 0.6% by weight of the composition.

10. The composition of claim 1 wherein the particles of barium sulfate have a specific surface area of about 0.8 m^2/g, the particles of silicon have a specific surface area of 6 to 8 m^2/g, and the red lead has a particle size of about 1 to 3 microns.

11. A delay composition in the form of free flowing granules each consisting essentially of mixed particles of silicon, barium-sulfate and red lead, together with a binder, the red lead being present in an amount of about 3 to 15 % by weight of the composition.

12. A delay element for a detonator or delay device, comprising an elongated hollow metal tube, containing a delay composition comprising mixed particles of silicon, barium sulfate and red lead, the red lead being present in an amount of about 3 to 15 % by weight of the composition.

13. The delay element of claim 12 wherein the delay composition has a density in the range of 1.8 to 2.2 g/cc.

14. The delay element of claim 12 wherein the delay composition has a density of 1.95 to 2.15 g/cc.

15. The delay element of claim 12 wherein the metal tube is made of a rigid metal.

16. The delay element of claim 12 wherein the tube is made of a metal selected from the group consisting of zinc, aluminum, steel and brass.

17. The delay element of claim 12 wherein the tube is made of zinc.

18. The delay element of claim 12 wherein the delay composition further contains a binder causing collections of said particles to agglomerate together in the form of granules.

19. The delay element of claim 18 wherein said binder is selected from the group consisting of solvent-soluble polymers, silica and swelling clays.

20. The delay element of claim 18 wherein said binder is a water-soluble derivative of cellulose.

21. The delay element of claim 18 wherein the binder is carboxymethyl cellulose.

22. The delay element of claim 21 wherein said binder is present in an amount of 0.2 to 0.6% by weight of the composition.

23. The delay element of claim 12 wherein particles of barium sulfate have a specific surface area of about 0.8 m^2/g, the particles of silicon have a specific surface area of 6 to 8 m^2/g, and the red lead has a particle size of about 1 to 3 microns.

24. The delay element of claim 12 having a length corresponding to a burning delay of at least one second.

25. The delay element of claim 12 having a length corresponding to a burning delay of about 2 to 9 seconds.

26. A delay element for a detonator or delay device, comprising an elongated hollow tube made of a rigid metal selected from the group consisting of zinc, aluminum, steel and brass, containing a delay composition in the form of free flowing granules each consisting essentially of mixed particles of silicon, barium sulfate and red lead, together with a binder, the red lead being present in an amount of about 3 to 15 % by weight of the composition, and the element having a length corresponding to a burning delay of at least one second.

27. A detonation delay device comprising a combustion starter, a charge to be detonated, and a delay element separating said combustion starter and said charge to be detonated, said delay element being an element according to claim 12.

28. The detonation delay device of claim 28 including non-electric means for igniting said starter.

29. The detonation delay device of claim 28 including electric means for igniting said starter.